

What is Claimed is:

1. A container comprising:
  - an orifice in a side-wall of said container;
  - a valve attachment to which a valve assembly is attached in communication with said orifice; and
  - a valve assembly for providing to a user continuous liquid flow from said container, said valve assembly comprising:
    - a valve housing, wherein said valve housing comprises:
      - a housing body portion having an air-back aperture and a liquid-out aperture in a first side facing said orifice, a spout in a second side facing away from said orifice, and a substantially hollow interior between said first side and said second side along a longitudinal axis; and
      - a housing attachment extending from said air-back aperture and said liquid-out aperture on said first side that attaches said housing body portion to said valve attachment; and
    - a valve core; wherein:
      - said valve core comprises a core body having a liquid-out passageway and an air-back passageway;
      - said core body moves within said hollow interior to register said liquid-out passageway with said liquid-out aperture and said spout to control liquid flow through said liquid-out passageway; and

said core body moves within said hollow interior to register said air-back passageway with said air-back aperture and said spout to control fluid flow through said air-back passageway.

2. The container of claim 1 wherein:  
said valve core further comprises an actuator; and  
said actuator is coupled to said core body and extends out from said hollow interior.

3. The container of claim 2 wherein said core body is movable to positions of differing degrees of registration of said liquid-out passageway with said liquid-out aperture and said spout and of said air-back passageway between said air-back aperture and said spout by movement of said actuator.

4. The container of claim 3 wherein said core body is rotatable about said longitudinal axis to said positions of differing degrees of registration by movement of said actuator.

5. The container of claim 4 wherein said core body is rotatable about said longitudinal axis to said positions of differing degrees of registration by rotation of said actuator.

6. The container of claim 3 wherein said core body is translatable along said longitudinal axis to said positions of differing degrees of registration by movement of said actuator.

7. The container of claim 6 wherein said core body is translatable along said longitudinal axis

to said positions of differing degrees of registration by rotation of said actuator.

8. The container of claim 1 wherein, when said housing attachment is attached to said valve attachment and said container is in an orientation in which it is used for dispensing liquid, the container end of said air-back aperture facing said orifice is at least partially above the container end of said liquid-out aperture facing said orifice.

9. The container of claim 1 further comprising an extension tube extending from said air-back aperture on said first side.

10. The container of claim 1 wherein:  
said core body has a peripheral surface;  
and

said liquid-out passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of said core body and a second opening formed through a second portion of said peripheral surface of said core body.

11. The container of claim 10 wherein said first opening is substantially the same shape as said liquid-out aperture.

12. The container of claim 1 wherein:  
said core body has a peripheral surface;  
and

said air-back passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of

said core body and a second opening formed through a second portion of said peripheral surface of said core body.

13. The container of claim 12 wherein said first opening is substantially the same shape as said air-back aperture.

14. The container of claim 1 wherein:  
said core body has a peripheral surface;  
and

said liquid-out passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

15. The container of claim 14 wherein:  
said channel extends circumferentially about said core body between a first edge and a second edge;

said first edge has a first width; and  
said second edge has a second width.

16. The container of claim 15 wherein:  
said liquid-out aperture has a third width; and

said third width is substantially equal to said first width.

17. The container of claim 1 wherein:  
said core body has a peripheral surface;  
and

said air-back passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

18. The container of claim 17 wherein:  
said channel extends circumferentially  
about said core body between a first edge and a second  
edge;

said first edge has a first width; and  
said second edge has a second width.

19. The container of claim 18 wherein said  
second width is greater than said first width.

20. The container of claim 18 wherein:  
said air-back aperture has a third  
width; and

said third width is substantially equal  
to said first width.

21. The container of claim 1 wherein:  
said core body is movable in a first  
direction from a first position, wherein:

said liquid-out passageway is  
registered such that no liquid flows through said  
liquid-out passageway; and

said air-back passageway is  
registered such that no fluid flows through said air-  
back passageway; and

to a second position, wherein:

said liquid-out passageway is  
registered such that liquid flows from said container  
substantially only through said liquid-out passageway;  
and

said air-back passageway is  
registered such that air flows into said container  
substantially only through said air-back passageway.

22. The container of claim 21 wherein:  
said core body further comprises an actuation track;  
and

said housing body further comprises an  
actuation stop, wherein, when in said first position:

said actuation stop interacts with  
said actuation track to prevent said core body from  
being movable in a second direction substantially  
opposite to said first direction.

23. The container of claim 1 wherein said  
container is rigid.

24. The container of claim 1 wherein said  
container is unvented.

25. The container of claim 24 wherein said  
container is rigid.

26. A valve assembly for providing to a user  
continuous liquid flow from a container, said container  
having an orifice in a side-wall and a valve attachment  
to which said valve assembly is attached in  
communication with said orifice, said valve assembly  
comprising:

a valve housing, wherein said valve  
housing comprises:

a housing body portion having an  
air-back aperture and a liquid-out aperture in a first  
side facing said orifice, a spout in a second side  
facing away from said orifice, and a substantially  
hollow interior between said first side and said second  
side along a longitudinal axis; and

a housing attachment extending from  
said air-back aperture and said liquid-out aperture on

said first side that attaches said housing body portion to said valve attachment; and

a valve core; wherein:

said valve core comprises a core body having a liquid-out passageway and an air-back passageway;

said core body moves within said hollow interior to register said liquid-out passageway with said liquid-out aperture and said spout to control liquid flow through said liquid-out passageway; and

said core body moves within said hollow interior to register said air-back passageway with said air-back aperture and said spout to control fluid flow through said air-back passageway.

27. The valve assembly of claim 26 wherein:

said valve core further comprises an actuator; and

said actuator is coupled to said core body and extends out from said hollow interior.

28. The valve assembly of claim 27 wherein said core body is movable to positions of differing degrees of registration of said liquid-out passageway with said liquid-out aperture and said spout and of said air-back passageway between said air-back aperture and said spout by movement of said actuator.

29. The valve assembly of claim 28 wherein said core body is rotatable about said longitudinal axis to said positions of differing degrees of registration by movement of said actuator.

30. The valve assembly of claim 29 wherein said core body is rotatable about said longitudinal

axis to said positions of differing degrees of registration by rotation of said actuator.

31. The valve assembly of claim 28 wherein said core body is translatable along said longitudinal axis to said positions of differing degrees of registration by movement of said actuator.

32. The valve assembly of claim 31 wherein said core body is translatable along said longitudinal axis to said positions of differing degrees of registration by rotation of said actuator.

33. The valve assembly of claim 26 wherein, when said housing attachment is attached to said valve attachment and said container is in an orientation in which it is used for dispensing liquid, the container end of said air-back aperture facing said orifice is at least partially above the container end of said liquid-out aperture facing said orifice.

34. The valve assembly of claim 26 further comprising an extension tube extending from said air-back aperture on said first side.

35. The valve assembly of claim 26 wherein:  
said core body has a peripheral surface;  
and

said liquid-out passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of said core body and a second opening formed through a second portion of said peripheral surface of said core body.



36. The valve assembly of claim 35 wherein said first opening is substantially the same shape as said liquid-out aperture.

37. The valve assembly of claim 26 wherein:  
said core body has a peripheral surface;  
and

said air-back passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of said core body and a second opening formed through a second portion of said peripheral surface of said core body.

38. The valve assembly of claim 37 wherein said first opening is substantially the same shape as said air-back aperture.

39. The valve assembly of claim 26 wherein:  
said core body has a peripheral surface;  
and

said liquid-out passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

40. The valve assembly of claim 39 wherein:  
said channel extends circumferentially about said core body between a first edge and a second edge;

said first edge has a first width; and  
said second edge has a second width.

41. The valve assembly of claim 40 wherein:  
said liquid-out aperture has a third width; and

said third width is substantially equal to said first width.

42. The valve assembly of claim 26 wherein:  
said core body has a peripheral surface;  
and

said air-back passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

43. The valve assembly of claim 42 wherein:  
said channel extends circumferentially about said core body between a first edge and a second edge;

said first edge has a first width; and  
said second edge has a second width.

44. The valve assembly of claim 43 wherein  
said second width is greater than said first width.

45. The valve assembly of claim 43 wherein:  
said air-back aperture has a third  
width; and

said third width is substantially equal to said first width.

46. The valve assembly of claim 26 wherein:  
said core body is movable in a first  
direction from a first position, wherein:

said liquid-out passageway is  
registered such that no liquid flows through said  
liquid-out passageway; and

said air-back passageway is  
registered such that no fluid flows through said air-  
back passageway; and

to a second position, wherein:

said liquid-out passageway is registered such that liquid flows from said container substantially only through said liquid-out passageway; and

said air-back passageway is registered such that air flows into said container substantially only through said air-back passageway.

47. The valve assembly of claim 46 wherein:

said core body further comprises an actuation track; and

said housing body further comprises an actuation stop, wherein:

when in said first position, said actuation stop interacts with said actuation track to prevent said core body from being movable in a second direction substantially opposite to said first direction; and

when in said second position, said actuation stop interacts with said actuation track to prevent said core body from being movable in said first direction.

48. The valve assembly of claim 26 wherein said container is unvented.

49. The valve assembly of claim 48 wherein said container is rigid.

50. A valve assembly comprising:

a valve housing having an air-back aperture and a liquid-out aperture in a source side, a spout in a dispensing side, and a substantially hollow

interior between said source side and said dispensing side and along a longitudinal axis; and

a valve core having a core body for movement within said hollow interior for providing a liquid-out passageway between said liquid-out aperture and said spout, and for providing an air-back passageway between said air-back aperture and said spout.

51. The valve assembly of claim 50 wherein:

said core body has a peripheral surface;

and

said liquid-out passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of said core body and a second opening formed through a second portion of said peripheral surface of said core body.

52. The valve assembly of claim 50 wherein:

said core body has a peripheral surface;

and

said liquid-out passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

53. The valve assembly of claim 50 wherein:

said core body has a peripheral surface;

and

said air-back passageway is formed within said core body between a first opening formed through a first portion of said peripheral surface of said core body and a second opening formed through a

second portion of said peripheral surface of said core body.

54. The valve assembly of claim 50 wherein:  
said core body has a peripheral surface;  
and

said air-back passageway is formed about said core body in a channel formed into a first portion of said peripheral surface of said core body.

55. The valve assembly of claim 50 wherein:  
said core body has a peripheral surface;  
and

said air-back aperture and liquid-out aperture are formed substantially adjacent to one another through a first portion of said peripheral surface of said valve housing.

56. The valve assembly of claim 55 further comprising a housing attachment extending from said first portion of said peripheral surface away from said hollow interior.

57. The valve assembly of claim 50 wherein:  
said valve core further comprises an actuator; and

said actuator is coupled to said core body and extends out from said hollow interior.

58. The valve assembly of claim 57 wherein said core body is movable within said hollow interior by movement of said actuator to vary the degree of registration of said liquid-out passageway with said liquid-out aperture and said spout.

59. The valve assembly of claim 57 wherein said core body is movable within said hollow interior by movement of said actuator to vary the degree of registration of said air-back passageway with said air-back aperture and said spout.

60. The valve assembly of claim 57 wherein said core body is movable within said hollow interior by movement of said actuator to vary the degree of registration of said liquid-out passageway with said liquid-out aperture and said spout, and to vary the degree of registration of said air-back passageway with said air-back aperture and said spout.

61. The valve assembly of claim 60 wherein said degree of registration of said liquid-out passageway varies substantially proportionally to said degree of registration of said air-back passageway.

62. The valve assembly of claim 57 wherein said core body is movable within said hollow interior by movement of said actuator for varying the degree of registration of said liquid-out passageway with said liquid-out aperture and said spout to control the flow of liquid through said liquid-out passageway, and for varying the degree of registration of said air-back passageway with said air-back aperture and said spout to control the flow of fluid through said air-back passageway.

63. The valve assembly of claim 62 wherein said degree of registration of said liquid-out passageway varies substantially proportionally to said degree of registration of said air-back passageway.

64. The valve assembly of claim 62 wherein said core body is rotatable about said longitudinal axis by movement of said actuator to vary said degree of registration of said liquid-out passageway and said air-back passageway.

65. The valve assembly of claim 64 wherein said core body is rotatable about said longitudinal axis by rotation of said actuator to vary said degree of registration of said liquid-out passageway and said air-back passageway.

66. The valve assembly of claim 62 wherein said core body is translatable along said longitudinal axis by movement of said actuator to vary said degree of registration of said liquid-out passageway and said air-back passageway.

67. The valve assembly of claim 66 wherein said core body is translatable along said longitudinal axis by rotation of said actuator to vary said degree of registration of said liquid-out passageway and said air-back passageway.

68. A container comprising:  
an orifice in a side-wall of said container; and  
a valve attachment to which said housing attachment of claim 50 is attached in communication with said orifice, wherein:  
when said housing attachment is attached to said valve attachment and said container is in an orientation in which it is used for dispensing liquid, the container end of said air-back aperture facing said orifice is at least partially above the

container end of said liquid-out aperture facing said orifice.

69. The valve assembly of claim 68 wherein said container is rigid.

70. The container of claim 68 wherein said container is unvented.

71. The container of claim 70 wherein said container is rigid.

72. A valve assembly for providing to a user continuous liquid flow from a container, said container having an orifice in a side-wall and orifice attachment means for attachment of said valve assembly about said orifice, said valve assembly comprising:

a valve housing, wherein said valve housing comprises:

a housing body portion having an air-back aperture and a liquid-out aperture in a first side facing said orifice, a spout in a second side facing away from said orifice, and a substantially hollow interior between said first side and said second side; and

housing attachment means extending from said first side about said air-back aperture and said liquid-out aperture for attaching said housing body portion to said orifice attachment means; and

a valve core wherein:

said valve core comprises a core body wherein;

said core body moves within said hollow interior to register a liquid-out passageway with said liquid-out aperture and said spout



to control the flow of liquid through said liquid-out passageway; and

said core body moves within said hollow interior to register an air-back passageway with said air-back aperture and said spout to control the flow of fluid through said air-back passageway.

73. The valve assembly of claim 72 wherein:  
said valve core further comprises an actuator; and

said actuator is coupled to said core body and extends out from said hollow interior.

74. The valve assembly of claim 73 wherein said core body is movable within said hollow interior by movement of said actuator from a first position wherein at least one of the conditions from the group consisting of the following is true to prevent liquid flow through said liquid-out passageway: 1) no portion of a first end of said liquid-out passageway is aligned with any portion of said liquid-out aperture, 2) no portion of said first end of said liquid-out passageway is aligned with any portion of said spout, 3) no portion of the second end of said liquid-out passageway is aligned with any portion of said liquid-out aperture, and 4) no portion of said second end of said liquid-out passageway is aligned with any portion of said spout, to a second position wherein at least a first portion of said first end of said liquid-out passageway is aligned with at least a first portion of said liquid-out aperture and at least a first portion of the second end of said liquid-out passageway is aligned with at least a first portion of said spout to allow liquid flow through said liquid-out passageway.

75. The valve assembly of claim 74 wherein, when in said second position, said first end of said liquid-out passageway is completely aligned with at least said first portion of said liquid-out aperture.

76. The valve assembly of claim 74 wherein, when in said second position, said second end of said liquid-out passageway is completely aligned with at least a first portion of said spout.

77. The valve assembly of claim 74 wherein, when in said second position, at least said first portion of said first end of said liquid-out passageway is completely aligned with said liquid-out aperture.

78. The valve assembly of claim 74 wherein, when in said second position, at least said first portion of said second end of said liquid-out passageway is completely aligned with said spout.

79. The valve assembly of claim 74 wherein, when in said second position, said first end of said liquid-out passageway is completely aligned with said liquid-out aperture and said second end of said liquid-out passageway is completely aligned with said spout.

80. The valve assembly of claim 74 wherein said liquid-out passageway is provided within said core body from a first liquid-out opening at said first end of said liquid-out passageway to a second liquid-out opening at said second end of said liquid-out passageway.

81. The valve assembly of claim 74 wherein, when in said first position, at least one of the

conditions from the group consisting of the following is true to prevent fluid flow through said air-back passageway: 1) no portion of a first end of said air-back passageway is aligned with any portion of said air-back aperture, 2) no portion of said first end of said air-back passageway is aligned with any portion of said spout, 3) no portion of the second end of said air-back passageway is aligned with any portion of said air-back aperture, and 4) no portion of said second end of said air-back passageway is aligned with any portion of said spout.

82. The valve assembly of claim 74 wherein, when in said second position, at least a first portion of a first end of said air-back passageway is aligned with at least a first portion of said air-back aperture and at least a first portion of the second end of said air-back passageway is aligned with at least a first portion of said spout to allow fluid flow through said air-back passageway.

83. The valve assembly of claim 82 wherein, when in said second position, said first end of said air-back passageway is completely aligned with at least said first portion of said air-back aperture.

84. The valve assembly of claim 82 wherein, when in said second position, said second end of said air-back passageway is completely aligned with at least a first portion of said spout.

85. The valve assembly of claim 82 wherein, when in said second position, at least said first portion of said first end of said air-back passageway is completely aligned with said air-back aperture.

86. The valve assembly of claim 82 wherein, when in said second position, at least said first portion of said second end of said air-back passageway is completely aligned with said spout.

87. The valve assembly of claim 82 wherein, when in said second position, said first end of said air-back passageway is completely aligned with said air-back aperture and said second end of said air-back passageway is completely aligned with said spout.

88. The valve assembly of claim 81 wherein said air-back passageway is provided within said core body from a first air-back opening at said first end of said air-back passageway to a second air-back opening at said second end of said air-back passageway.

89. The valve assembly of claim 74 wherein, when in said first position, at least one of the conditions from the group consisting of the following is true to prevent fluid flow through said air-back passageway: 1) no portion of said air-back passageway is aligned with any portion of said air-back aperture and 2) no portion of said air-back passageway is aligned with any portion of said spout.

90. The valve assembly of claim 74 wherein, when in said second position, said air-back passageway is aligned with at least a first portion of said air-back aperture and at least a first portion of said spout to allow fluid flow through said air-back passageway.

91. The valve assembly of claim 90 wherein, when in said second position, said air-back passageway is completely aligned with said air-back aperture.

92. The valve assembly of claim 89 wherein said air-back passageway is provided about the peripheral surface of said core body in an air channel extending from a first end portion of said air-back passageway to a second end portion of said air-back passageway.

93. The valve assembly of claim 73 wherein said core body is movable within said hollow interior by movement of said actuator from a first position wherein at least one of the conditions from the group consisting of the following is true to prevent liquid flow through said liquid-out passageway: 1) no portion of said liquid-out passageway is aligned with any portion of said liquid-out aperture and 2) no portion of said liquid-out passageway is aligned with any portion of said spout, to a second position wherein said liquid-out passageway is aligned with at least a first portion of said liquid-out aperture and at least a first portion of said spout to allow liquid flow through said liquid-out passageway.

94. The valve assembly of claim 93 wherein, when in said second position, said liquid-out passageway is completely aligned with said liquid-out aperture.

95. The valve assembly of claim 93 wherein said liquid-out passageway is provided about the peripheral surface of said core body in a liquid channel extending from a first end portion of said

liquid-out passageway to a second end portion of said liquid-out passageway.

96. The valve assembly of claim 93 wherein, when in said first position, at least one of the conditions from the group consisting of the following is true to prevent fluid flow through said air-back passageway: 1) no portion of a first end of said air-back passageway is aligned with any portion of said air-back aperture, 2) no portion of said first end of said air-back passageway is aligned with any portion of said spout, 3) no portion of the second end of said air-back passageway is aligned with any portion of said air-back aperture, and 4) no portion of said second end of said air-back passageway is aligned with any portion of said spout.

97. The valve assembly of claim 93 wherein, when in said second position, at least a first portion of a first end of said air-back passageway is aligned with at least a first portion of said air-back aperture and at least a first portion of the second end of said air-back passageway is aligned with at least a first portion of said spout to allow fluid flow through said air-back passageway.

98. The valve assembly of claim 97 wherein, when in said second position, said first end of said air-back passageway is completely aligned with at least said first portion of said air-back aperture.

99. The valve assembly of claim 97 wherein, when in said second position, said second end of said air-back passageway is completely aligned with at least a first portion of said spout.

100. The valve assembly of claim 97 wherein, when in said second position, at least said first portion of said first end of said air-back passageway is completely aligned with said air-back aperture.

101. The valve assembly of claim 97 wherein, when in said second position, at least said first portion of said second end of said air-back passageway is completely aligned with said spout.

102. The valve assembly of claim 97 wherein, when in said second position, said first end of said air-back passageway is completely aligned with said air-back aperture and said second end of said air-back passageway is completely aligned with said spout.

103. The valve assembly of claim 96 wherein said air-back passageway is provided within said body core from a first air-back opening at said first end of said air-back passageway to a second air-back opening at said second end of said air-back passageway.

104. The valve assembly of claim 93 wherein, when in said first position, at least one of the conditions from the group consisting of the following is true to prevent fluid flow through said air-back passageway: 1) no portion of said air-back passageway is aligned with any portion of said air-back aperture and 2) no portion of said air-back passageway is aligned with any portion of said spout.

105. The valve assembly of claim 93 wherein, when in said second position, said air-back passageway is aligned with at least a first portion of said air-back aperture and at least a first portion of said

spout to allow fluid flow through said air-back passageway.

106. The valve assembly of claim 105 wherein, when in said second position, said air-back passageway is completely aligned with said air-back aperture.

107. The valve assembly of claim 104 wherein said air-back passageway is provided about the peripheral surface of said core body in an air channel extending from a first end portion of said air-back passageway to a second end portion of said air-back passageway.

108. The valve assembly of claim 72 wherein said housing body portion has a longitudinal axis, and wherein said core body is rotatable within said hollow interior about said longitudinal axis.

109. The valve assembly of claim 108 wherein:  
said valve core further comprises an actuator;

said actuator is coupled to said core body and extends out from said hollow interior; and

said core body is rotatable within said hollow interior about said longitudinal axis by movement of said actuator.

110. The valve assembly of claim 109 wherein said core body is rotatable within said hollow interior about said longitudinal axis by rotation of said actuator.

111. The valve assembly of claim 72 wherein:  
said housing body portion has a longitudinal axis; and



said core body is translatable within said hollow interior along said longitudinal axis; and

wherein said valve core further comprises an actuator, wherein:

said actuator is coupled to said core body and extends out from said hollow interior; and

said core body is translatable within said hollow interior along said longitudinal axis by movement of said actuator.

112. The valve assembly of claim 111 wherein said core body is translatable within said hollow interior along said longitudinal axis by rotation of said actuator.

113. The valve assembly of claim 72 wherein, when said housing attachment means attaches to said orifice attachment means, the container end of said air-back aperture is above the container end of said liquid-out aperture with respect to the bottom of said container.

114. The valve assembly of claim 72 wherein said container is rigid.

115. The container of claim 72 wherein said container is unvented.

116. The container of claim 115 wherein said container is rigid.

117. The valve assembly of claim 73 wherein said core body is movable within said hollow interior by movement of said actuator from a first position

wherein fluid is prevented from flowing between said liquid-out aperture and said spout and from flowing between said air-back aperture and said spout, to a second position wherein at least a first portion of said liquid-out passageway is aligned with at least a first portion of said liquid-out aperture and at least a first portion of said spout to allow liquid flow through said liquid-out passageway and wherein at least a first portion of said air-back passageway is aligned with at least a first portion of said air-back aperture and at least a second portion of said spout to allow fluid flow through said liquid-out passageway.

118. A method of controlling the continuous flow of a liquid through a valve assembly between a container holding said liquid and the ambient atmosphere, said container including i) an orifice and ii) an orifice attachment that attaches said valve assembly about said orifice, and said valve assembly including i) a valve housing having a substantially hollow interior along a longitudinal axis, a liquid-out aperture, an air-back aperture, and a spout, ii) a valve core, and iii) an assembly attachment extending from said valve housing about said liquid-out aperture and said air-back aperture for attachment to said orifice attachment; said method comprising:

moving said valve core within said hollow interior for varying the degree of registration of a liquid-out passageway with said liquid-out aperture and said spout to control said liquid flow through said liquid-out passageway; and for varying the degree of registration of an air-back passageway

between said air-back aperture and said spout to control fluid flow through said air-back passageway.

119. The method of claim 118, wherein said valve assembly further comprises an actuator coupled to said valve core, wherein said actuator extends out from said hollow interior.

120. The method of claim 119, wherein said moving said valve core comprises actuating said actuator.

121. The method of claim 120 further comprising, on said moving, actuating said actuator in substantially a first direction to a first position wherein said liquid flows from said container to said ambient atmosphere through said liquid-out passageway and through said air-back passageway.

122. The method of claim 121 further comprising, on said actuating said actuator to said first position, achieving equilibrium wherein the pressure above said liquid in said container is less than the pressure of said ambient atmosphere.

123. The method of claim 122 wherein, on said achieving equilibrium, air flows from said ambient atmosphere into said container substantially only through said air-back passageway.

124. The method of claim 123 wherein, on said achieving equilibrium, said liquid flows from said container to said ambient atmosphere substantially only through said liquid-out passageway.

125. The method of claim 124 further comprising, on said achieving equilibrium, actuating said actuator in substantially said first direction to a second position to increase said degree of registration of said liquid-out passageway and to increase said degree of registration of said air-back passageway.

126. The method of claim 124 further comprising, on said achieving equilibrium, actuating said actuator in a second direction substantially opposite to said first direction to a second position to decrease said degree of registration of said liquid-out passageway and to decrease said degree of registration of said air-back passageway.

127. The method of claim 124 further comprising, on said achieving equilibrium, actuating said actuator in a second direction substantially opposite to said first direction to a second position wherein no liquid flows through said liquid-out passageway and no fluid flows through said air-back passageway.

128. The method of claim 127 further comprising, after said actuating said actuator to said second position, actuating said actuator in substantially said first direction to a third position wherein said liquid flows from said container to said ambient atmosphere substantially only through said liquid-out passageway.

129. The method of claim 128 wherein, on said actuating said actuator to said third position, said air flows from said ambient atmosphere into said

container substantially only through said air-back passageway.

130. The method of claim 127 wherein, on said actuating said actuator to said third position, preventing said actuator from actuating in substantially said second direction to a fourth position.

131. The method of claim 118 wherein said liquid-out passageway is formed within said valve core between a first opening formed through a first portion of the peripheral surface of said valve core and a second opening formed through a second portion of said peripheral surface of said valve core.

132. The method of claim 118 wherein said liquid-out passageway is formed about said valve core in a channel formed into a first portion of the peripheral surface of said valve core.

133. The method of claim 118 wherein said air-back passageway is formed within said valve core between a first opening formed through a first portion of the peripheral surface of said valve core and a second opening formed through a second portion of said peripheral surface of said valve core.

134. The method of claim 118 wherein said air-back passageway is formed about said valve core in a channel formed into a first portion of the peripheral surface of said valve core.

135. The method of claim 120, wherein said moving said valve core comprises rotating said valve core about said longitudinal axis.

136. The method of claim 135, wherein said rotating said valve core comprises rotating said actuator.

137. The method of claim 120, wherein said moving said valve core comprises translating said valve core along said longitudinal axis.

138. The method of claim 137, wherein said translating said valve core comprises rotating said actuator.

139. The method of claim 118 wherein said container is rigid.

140. The method of claim 118 wherein said container is unvented.

141. The method of claim 140 wherein said container is rigid.

142. A method of controlling the liquid and air flow through a valve assembly, said valve assembly comprising i) a valve housing having a hollow interior, a liquid-out aperture, an air-back aperture, and a spout, and ii) a valve core; said method comprising:  
moving said core within said hollow interior for providing a liquid-out passageway between said liquid-out aperture and said spout, and for providing an air-back passageway between said air-back aperture and said spout.